

**FLASH MEMORY CELL AND METHOD OF MANUFACTURING
THE SAME, AND PROGRAMMING/ERASING/READING METHOD
IN THE FLASH MEMORY CELL**

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BACKGROUND OF THE INVENTION

*This application is a division of 10/287,781 filed 11/05/02
and now patent No. 6,703,275*

Field of the Invention:

The invention relates generally to a flash memory cell and method of
10 manufacturing the same, and programming/erasing/reading method in the flash
memory cell. More particularly, the invention relates to a flash memory cell
having a silicon-oxide-nitride-oxide-silicon (SONOS) structure in which
silicon, an oxide film, a nitride film, an oxide film and silicon are sequentially
stacked, and method of manufacturing the same, and
15 programming/erasing/reading method in the flash memory cell.

Description of the Prior Art:

A flash memory cell is a non-volatile memory device that is
electrically programmed and erased. A basic structure and
20 programming/erasing operation of the flash memory cell will be described
below.

Fig. 1 is a cross-sectional view of a conventional flash memory cell for
describing the structure and programming/erasing operation of the flash